

# ARKANSAS FLORA: ADDITIONS, REINSTATEMENTS, EXCLUSIONS, AND RE-EXCLUSIONS

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## ABSTRACT

Nine species are reported as new to the flora of Arkansas: *Agalinis nuttallii* Shinnery (Scrophulariaceae), *Azolla caroliniana* Willd. (Azollaceae), *Crataegus thermopegaea* Palmer (Rosaceae), *Cyrtomium falcatum* (L.f.) K. Presl (Dryopteridaceae), *Nerium oleander* L. (Apocynaceae), *Polygala alba* Nutt. (Polygalaceae), *Punica granatum* L. (Punicaceae), *Ricinus communis* L. (Euphorbiaceae), and *Schinus terebinthifolius* Raddi (Anacardiaceae). They are a mixture of extinct, overlooked, or urban exotic-escaped species, some of which are of special concern as they pose new problems for urban poison control workers. Literature and herbarium work uncovered that 12 Arkansas species previously excluded actually have known and valid vouchers, and they are re-instated: *Acacia farnesiana* (L.) Willd. (Mimosaceae), *Arabis glabra* (L.) Bernh. (Brassicaceae), *Canavalia ensiformis* (L.) DC. (Fabaceae), *Cladium jamaicense* Crantz (Cyperaceae), *Eragrostis trichodes* (Nutt.) Wood (Poaceae), *Halesia diptera* Ellis (Styracaceae), *Lygodesmia juncea* (Pursh) D. Don (Asteraceae), *Prosopis glandulosa* Torr. var. *glandulosa* (Mimosaceae), *Rhynchospora colorata* (L.) Pfeiffer (Cyperaceae), *Rosa canina* L. (Rosaceae), *Sagina procumbens* L. (Caryophyllaceae), and *Trifolium stoloniferum* Muhl. (Fabaceae). Another 13 species previously excluded and/or re-excluded from Arkansas were recently and erroneously re-instated, requiring re-exclusion. Another 76 species are here excluded, being reported erroneously as being from Arkansas, based either on literature reports that lack supporting voucher specimens or on a variety of clerical errors. These 21 additions and 89 subtractions to the Arkansas flora point to problems in achieving a uniform basis of deciding which plants to include in a flora and what constitutes sufficient documentation for known and valid vouchers.

## RESUMEN

Se citan nueve especies nuevas para la flora de Arkansas: *Agalinis nuttallii* Shinnery (Scrophulariaceae), *Azolla caroliniana* Willd. (Azollaceae), *Crataegus thermopegaea* Palmer (Rosaceae), *Cyrtomium falcatum* (L.f.) K. Presl (Dryopteridaceae), *Nerium oleander* L. (Apocynaceae), *Polygala alba* Nutt. (Polygalaceae), *Punica granatum* L. (Punicaceae), *Ricinus communis* L. (Euphorbiaceae), y *Schinus terebinthifolius* Raddi (Anacardiaceae). Son una mezcla de extintas, pasadas por alto, o especies urbanas exóticas-escapadas, alguna de las cuales son de especial interés ya que causan nuevos problemas a los trabajadores del control de venenos urbanos. Con el trabajo bibliográfico y de herbario se descubrió que 12 especies de Arkansas previamente excluidas tienen actualmente testigos conocidos y válidos, y son re-instauradas: *Acacia farnesiana* (L.) Willd. (Mimosaceae), *Arabis glabra* (L.) Bernh. (Brassicaceae), *Canavalia ensiformis* (L.) DC. (Fabaceae), *Cladium jamaicense* Crantz (Cyperaceae), *Eragrostis trichodes* (Nutt.) Wood (Poaceae), *Halesia diptera* Ellis (Styracaceae), *Lygodesmia juncea* (Pursh) D. Don (Asteraceae), *Prosopis glandulosa* Torr. var. *glandulosa* (Mimosaceae), *Rhynchospora colorata* (L.) Pfeiffer (Cyperaceae), *Rosa canina* L. (Rosaceae), *Sagina procumbens* L. (Caryophyllaceae), y *Trifolium stoloniferum* Muhl. (Fabaceae). Otras 13 especies excluidas previamente y/o re-excluidas



de Arkansas fueron reciente y erróneamente re-instauradas, y necesitan una re-exclusión. Otras 76 especies se excluyen aquí, por haberse citado erróneamente de Arkansas, basadas tanto en citas bibliográficas que carecen de pliegos testigo o en varios errores administrativos. Estas 21 adiciones y 89 substracciones a la flora de Arkansas apuntan los problemas de poner a punto una base uniforme para decidir que plantas incluir en una flora, y que constituye suficiente documentación para los pliegos testigo conocidos y válidos.

The preparation of a state flora remains the grandest state scientific enterprise in most states. More than 1200 articles by nearly 100 botanists documented and explained the diversity, abundance, and distribution of its flora and vegetation (Peck & Peck 1988; Peck et al. 2000). Vascular plant floristics in Arkansas commenced with the 1819 exploratory travels, collections, and published list by Thomas Nuttall (1835). Earlier expeditions commented on plants, but appeared to either not have vouchers or none have survived from Arkansas locations (Palmer 1927, Morton 1967, MacRoberts et al. 1997). Subsequent flora lists were prepared by Lesquereux (1860) of 1320 species and by Branner and Coville (1891) of 1534 species, but were developed from limited field work and were poorly supported with extant vouchers. Buchholz and Palmer (1926) attempted to verify, locate vouchers, or re-collect many old Arkansas records, and in the process, added 534 species for a total of 2068. Demaree (1943) compiled all past lists, personally added 694 species, and presented a total list of 2723 species. As stated by Demaree (1943), many species on his list were not his records, but were compiled at face value from prior lists. Demaree (1943) knew some were of dubious identity, probably lacked vouchers, and contained records from Oklahoma when it was part of the "Arkansas Territory" from 1819–1836. But there was a war going on, no resources could be spared to validate the list, and the fate of species-level biology in Arkansas was in doubt.

Edwin B. Smith inherited the Arkansas state flora enterprise. Through near heroic efforts, being the last to attempt a "one man band" approach to a state flora, he produced two annotated checklists with county maps. Smith (1978) provided an annotated checklist with county dot maps for 2338 species, a list of 200 possible additions, a list of 365 excluded species (many old reports appeared to lack vouchers of any kind), and state maps with 40,941 county dots. Smith (1988) presented a revised list and maps for 2469 species, 324 possible additions, 375 excluded species, and maps with 49,510 county dots.

In 1998, a consortium of 16 botanists formed the Arkansas Vascular Flora Committee to prepare a checklist, database, atlas, and manual. To date, the Arkansas Vascular Flora Committee has located and verified vouchers for over 3350 taxa. Based upon the immensely helpful national electronic lists (Kartesz 1998, Kartesz & Meacham 1999; NRCS 1999), near monographic state floras from adjacent Missouri and Texas, the atlas and manual of the Flora of the Great Plains, checklists and atlases of Louisiana, Tennessee, and Texas, and the serial



volumes of the Flora North America project (Flora North American Editorial Committee 1993+), another 80 taxa might yet be added.

Through herbarium search and review of literature and national electronic floras, 110 noteworthy Arkansas species were identified that required addition (9), reinstatement (12), re-exclusion (13), or exclusion (76). The nine additions included overlooked but long-standing elements of the Arkansas flora and recent escapes with properties of ecological concern (invasive) or human concern (toxic). Twelve re-instated species included previously excluded, extinct, or extirpated species that required re-instatement as their vouchers were finally located, were replaced, or were erroneously excluded [criteria and judgment differs with differing workers]. Thirteen species were re-excluded that were erroneously reported and re-reported as present in Arkansas. Another 76 species were excluded as they lack a valid or known voucher to support their inclusion. With this update, the listed flora of Arkansas is treated more consistently with that of floras of other states in the region and with national lists.

The purpose of this current report, beyond communication of state and county noteworthy records, was to demonstrate the need for continued judgment and interpretation of floristic information, whether in the older hard-copy literature or in the newer data-based, on-line records. Records of each state need to be reviewed by experts in taxonomic groups as well as local experts to insure a correct name and proper documentation exists. Criteria for inclusion need to be carefully followed regarding invasive, escaped, waif, and naturalized plants. Equally important is to exclude species erroneously included in past lists. There may well be more exclusions than new additions (Ertter 2000). Documentation of known and valid vouchers as to herbarium of deposit, identity, collector, and number should be the basis for inclusion, not just a passage in the text, or a tone-map or dot-map. Literature errors may need to be removed more than once from the database. Increased efforts at quality control and assurance through time and effort will result in a continually improved and more powerful tool at both the state and national levels (Kartesz 2000).

#### ADDITIONS TO ARKANSAS FLORA

**Agalinis nuttallii** Shinnars (Scrophulariaceae)—This is the “first report” for Arkansas of this historical plant, now considered extinct. First collected and named by Nuttall based on his work in Arkansas (Nuttall 1835, Palmer 1927) as *Gerardia longifolia* Nutt. Although similar to *G. holamantha* (Pennell) Pennell, Pennell (1935) asserted that it was distinct. The lack of conservation of the name *Gerardia* required a new combination that was made by Shinnars (1962) in honor of its first collector. The species was listed for Arkansas by Lesquereux (1860). Surprisingly, the species was not listed, discussed, or excluded by Smith (1978, 1988), but was listed as an Arkansas endemic by Kartesz and Meacham (1999).



Voucher: **ARKANSAS**: along the bank of the Arkansas, locality not specified, *Nuttall s.n.* (BM, K, PH).

**Azolla caroliniana** Willd. (Azollaceae)—The first collection of this species from Arkansas was from a swamp at Spruell's Recreation Area, 2 mi north of Doddridge along US 71 on 19 May 1977 by B.L. Lipscomb. All other material of this genus from Arkansas was referable to *A. mexicana* Schlecht. & Cahm. ex K. Presl.

Voucher: **ARKANSAS: Miller Co.:** *Lipscomb 2064* (LRU).

**Crataegus thermopegaea** Palmer (Rosaceae)—This species is reported based on a collection by E.J. Palmer at Hot Springs, Arkansas in Apr and Oct 1925. It was described as a new species by Palmer (1926). Palmer described 67 species as new for *Crataegus*; this is the only one still recognized on national lists. The species was not recognized by Tucker (1976) or Smith (1978, 1988), but was recognized as an Arkansas endemic by Kartesz and Meacham (1999).

Vouchers: **ARKANSAS: Garland Co.:** *Palmer 26843(A), Palmer 26843(G)*.

**Cyrtomium falcatum** (L.f.) K. Presl (Dryopteridaceae)—This is an escaped exotic species that can persist several years in Arkansas when its rhizome is well protected; plants remain wintergreen in southern to central Arkansas. The species is cultivated state-wide, escaping rarely, but persisting in urban waste areas, at least in Little Rock. A related species *Cyrtomium fortunei* J. Sm. (Fortune's Net-vein Holly Fern) was collected in 1988 by Wilson Baker as part of a contract with The Nature Conservancy to study plants in the batture lands of Desha Co., Arkansas. Unfortunately, the voucher material was taken to Tall Timbers Research Station, Georgia, and remains unmounted and unreported. Therefore, the later collection from Little Rock was the first report of the genus from Arkansas.

Voucher: **ARKANSAS: Pulaski Co.:** *Peck 02744* (LRU).

**Nerium oleander** L. (Apocynaceae)—This is a very toxic horticultural shrub, escaping from landscapes to urban waste places in Boyle Park, Little Rock, evidently at least "root-hardy" and persisting in Arkansas.

Voucher: **ARKANSAS: Pulaski Co.:** *Peck 02-845* (LRU).

**Polygala alba** Nutt. (Polygalaceae)—This species was first collected in Arkansas on 21 May 1977 from a wooded hillside 12 mi north of Murfreesboro in Pike Co. by B.L. Lipscomb.

Voucher: **ARKANSAS: Pike Co.:** *Lipscomb 2177* (LRU).

**Punica granatum** L. (Punicaceae)—This horticultural shrub has persisted at old homesteads in Arkansas and has escaped to urban waste places and to Boyle Park, Little Rock, where it has persisted for decades.



Vouchers: **ARKANSAS: Little River Co.:** *Tucker 16121* (APCR), **Pulaski Co.:** *Luyet 8311* (LRU).

**Ricinus communis** L. (Euphorbiaceae)—A very toxic horticultural, suffrutescent plant or semi-perennial herb, escaping from cultivation and establishing small colonies in urban and rural waste or disturbed areas, now state-wide in Arkansas.

Vouchers: **ARKANSAS: Bradley Co.:** *Leslie 1515* (UAM). **Pulaski Co.:** *Luyet 137* (LRU). **Stone Co.:** *Leonard 124* (LRU), and by the author and deposited at LRU in 22 counties: **Arkansas Co.:** 02369, **Baxter Co.:** 98117, **Cleburne Co.:** 96185, **Faulkner Co.:** 97321, **Garland Co.:** 97268, **Grant Co.:** 99244, **Hot Spring Co.:** 97232, **Independence Co.:** 96344, **Izard Co.:** 96127, **Jackson Co.:** 99176, **Jefferson Co.:** 02376, **Lonoke Co.:** 02276, **Marion Co.:** 96432, **Monroe Co.:** 96518, **Phillips Co.:** 02333, **Prairie Co.:** 02312, **Saline Co.:** 02350, **Searcy Co.:** 98253, **Van Buren Co.:** 98278, **White Co.:** 99561, **Woodruff Co.:** 97566, and **Yell Co.:** 02467.

**Schinus terebinthifolius** Raddi (Anacardiaceae)—A toxic, invasive woody shrub-tree, was introduced into a backyard in Camden in southern Arkansas as a horticultural novelty. The tree with plentiful red berries was a Christmas tree “present” from Florida. It was planted and had survived 3 winters, with root suckers and seedlings produced around the original stock. The plants were eradicated by the homeowner upon advice of the author before it became further established or irreparably naturalized.

Voucher: **ARKANSAS: Ouachita Co.:** *Peck 90117* (LRU).

#### REINSTATEMENTS TO ARKANSAS FLORA

**Acacia farnesiana** (L.) Willd. (Mimosaceae)—This species was first reported for Arkansas by Demaree (1943). Tucker (1976) included this species, but considered it to be a “rare adventive.” Smith (1978, 1988) excluded it from the state flora, as the specimen was sterile material [not unusual for woody plant collections], and he questioned the correctness of its identity. The voucher specimens are of this species, collected from a 3–4 m tall tree adjacent to the Arkansas River near Little Rock, but no longer present.

Voucher: **ARKANSAS: Pulaski Co.:** *Palmer 29600* (A, UARK).

**Arabis glabra** (L.) Bernh. (Brassicaceae)—This species was first reported for Arkansas by Branner and Coville (1891), compiled by Demaree (1943), and reported by Fernald (1950). Smith (1978) suggested that this record might be a misidentified *Arabis laevigata* (Muhl. ex Willd.) Poir., but he did not consult the voucher. Al-Shehbaz (1988) noted that M. Hopkins (1937) reported this species from Pulaski Co., AR. Smith (1988) excluded it again, but noted that “as it has not been recollected in the last 50 years [1895], I assume it is no longer extant in the state.”

Voucher: **ARKANSAS: Pulaski Co.:** *Hasse s.n.* (NY).

**Canavalia ensiformis** (L.) DC. (Fabaceae)—Sauer (1964) reported this prehistoric American Indian domesticate for Arkansas based on a collection by Harvey in



1885 and by Jennings in 1938. All other specimens, particularly at UARK, are based on cultivated materials dating from 1930 to 1959. The species was listed for Arkansas by Kartesz and Meacham (1999), citing Sauer (1964).

Vouchers: **ARKANSAS**: locality not specified, *Harvey s.n.* (GH), *Jennings s.n.* (F).

**Cladium jamaicense** Crantz (Cyperaceae)—The species was reported first by Branner and Coville (1891). Demaree (1943) reported this species based on that report and on his 1939 collection in Bradley Co., AR (*Demaree 19433* BRIT, MO). Without examining the vouchers, Smith (1978) listed it as “excluded” from Arkansas, based on its reported range in the floras of Texas and the Carolinas. Orzell and Bridges (1987) examined and verified the Demaree collections, but considered it to be probably extirpated from the state. Smith (1988) listed it as “excluded” in that it was only a waif and now extirpated from Arkansas. The species was recently collected in four Arkansas counties.

Vouchers: **ARKANSAS**: **Bradley Co.**: *Peck 98247* (LRU). **Calhoun Co.**: *Peck 20220* (LRU). **Ouachita Co.**: *Peck 20240* (LRU). **Union Co.**: *Peck 20234* (LRU).

**Eragrostis trichodes** (Nutt.) Wood (Poaceae)—The species was reported from Arkansas by Moore (1961) from two counties (Logan and Pulaski), listed by Gould (1975) from southwestern Arkansas, but excluded from the flora by Smith (1988), as one specimen (*Moore 470609* UAM) was a misidentified sheet of *E. hirsuta*. The 2<sup>nd</sup> specimen cited by Moore (1961) from Pulaski Co. is not at UARK. Kartesz and Meacham (1999) listed this species as present in Arkansas citing a Nuttall voucher at PH.

Voucher: **ARKANSAS**: without precise locality data, *Nuttall s.n.* (PH); **Pulaski Co.**: *Merrill 14* (UARK?).

**Halesia diptera** Ellis (Styracaceae)—The species was first reported for Arkansas by Branner and Coville (1891), compiled by Demaree (1943), and reported by Tucker (1976). Reveal and Seldin (1976) reviewed the taxonomy of this species and its varieties. Smith (1978) included this species in his first checklist, but he excluded it from the second edition (Smith, 1988), noting that it was collected only once in 1887 by Letterman, that “it has not been re-collected in the last century, [and] it is probably no longer extant in the state.” R. G. Erickson (1989) discovered a second population in Lafayette Co., Arkansas. The specimen was sent to APCR, but was apparently lost before being mounted. More recently, a third population was located in Union Co. by R. Dale Thomas.

Vouchers: **ARKANSAS**: **Nevada Co.**: *Letterman s.n.* (ILL), **Union Co.**: *Thomas 109,060* (NLU).

**Lygodesmia juncea** (Pursh) D. Don (Asteraceae)—This species was first reported for Arkansas by Buchholz and Palmer (1926). The first vouchered collection was by Demaree (1943). Vuilleumier (1973) reported this species for Arkansas based on Demaree’s 1937 collections. Tomb (1980) re-reported the species from Arkansas,



noting the locality as Magnet Cove, AR. Without examining vouchers or seeing the plant in the field, Smith (1978, 1988) excluded this species as being “only a waif,” and therefore not part of the “normal Arkansas flora.” Orzell and Bridges (1987) reported the status of this species in Arkansas as being “probably extirpated.” Kartesz and Meacham (1999) reported this species as present in Arkansas, but cited Smith (1988).

Vouchers: **ARKANSAS: Hot Spring Co.:** *Demaree 16264* (BRIT, NY).

**Prosopis glandulosa** Torr. var. **glandulosa** (Mimosaceae)—Tucker (1976) reported this species based on collections by D. M. Moore in 1954 and 1955 in Pulaski Co., noting that it was a “rare adventive” of potentially long duration that was collected along the railroad tracks on the southern edge of Little Rock, apparently brought in with livestock. Smith (1978, 1988) excluded this species, considering it to be only a waif, and not “part of the normal flora.”

Vouchers: **ARKANSAS: Pulaski Co.:** *Moore 54343, 55517* (UARK).

**Rhynchospora colorata** (L.) Pfeiffer (Cyperaceae)—First reported for Arkansas by Demaree (1943) based on his collections at Warren Prairie, Bradley Co., Arkansas. Smith (1978) listed this species for Bradley Co. and noted a potential report from Pope Co., Arkansas. Orzell and Bridges (1987) reported “a stand of thousands of plants from Little River County,” but opined that the Bradley Co. population was extirpated. Smith (1988) reported this species for Bradley Co. and Little River Co., but noted that the Pope Co. record was erroneous, based on diseased material of a *Cyperus* sedge. Similarly diseased sedge plants occur in Bradley Co. Recently, the species was collected in another 10 counties.

Vouchers: **ARKANSAS: Ashley Co.:** *Sontag 76* (LRU). **Bradley Co.:** *Demaree 15044* (F, MO, BRIT, NY); *Demaree 19264* (GH, MO, NY, BRIT, UARK); *Demaree 19268* (BRIT); *Demaree 19269* (MICH, NLU, NY, TEX, UARK); *Logan 101* (UCAC). **Calhoun Co.:** *Marian 22* (LRU). **Columbia Co.:** *Smith 32* (LRU). **Drew Co.:** *Smith 32* (LRU). **Hempstead Co.:** *Sontag 108* (LRU). **Lafayette Co.:** *Smith 76* (LRU). **Little River Co.:** *Orzell 2726* (APCR, MO, NLU, BRIT, TEX, UARK). **Miller Co.:** *Sontag 63* (LRU). **Ouachita Co.:** *Bell 99* (LRU). **Union Co.:** *Peck 20235* (LRU).

**Rosa canina** L. (Rosaceae)—Smith (1978, 1988) excluded this species, based on a Franklin Co. collection, as it “probably represents a local escape or was persistent at an old home site; it should not be considered as a normal part of our flora.” Yet, many species have entered the Arkansas flora by this method of introduction. Kartesz and Meacham (1999) listed it as “present,” based on Smith (1988).

Voucher: **ARKANSAS: Franklin Co.:** *Davis 449* (UARK).

**Sagina procumbens** L. (Caryophyllaceae)—First reported by Branner and Coville (1891), and then listed by Demaree (1943). Without inspecting vouchers, Smith



(1978) excluded this species, suggesting that it was a misidentified *S. decumbens* (Ell.) Torr. and A. Gray. Crow (1978) noted that it was correctly named and was collected in Pulaski Co. in May 1886. Smith (1988) re-excluded this species, noting that it was “not re-collected in the intervening century.”

Voucher: **ARKANSAS: Pulaski Co.:** *Hasse s.n.* (MONTU).

**Trifolium stoloniferum** Muhl. (Fabaceae)—Smith (1978) did not list this species, but noted it as a “possible addition” to the flora of Arkansas. Brooks (1983a, 1983b; Batgie, 1985) reported that it had been collected from Arkansas in 1896. Smith (1988) excluded it from the flora of Arkansas as it was “no longer extant—and I am therefore excluding it.” This species has declined across its entire range since settlement.

Voucher: **ARKANSAS: Independence Co.:** *Eggert s.n.* (MO).

#### RE-EXCLUDED FROM ARKANSAS FLORA

**Asclepias sullivantii** Engelm. ex A. Gray (Asclepiadaceae)—First reported in Arkansas by Buchholz and Palmer (1926). This report was based on a collection from the southwestern corner of the University of Arkansas campus at Fayetteville, Washington Co. According to the card file by D. Moore kept at UARK, E.J. Palmer observed it on 12 Jun 1923, and it was collected by Buchholz on 13 Jun 1923 (*Buchholz 20145-6*). The voucher is not at UARK or MO, but it might be at the Arnold Arboretum. A second report was made erroneously by Smith (1978, 1988) from Jackson Co., Arkansas, based on a misidentified collection by D. Moore (*Moore 440164* UARK). Another specimen of this species was collected by E.J. Palmer from Jackson Co., Missouri, deposited at MO, and reported by Woodson (1954). Woodson (1954) did not map this species in Arkansas. The Palmer specimen label was typed on a “Flora of Arkansas” label, with the corrected state name of Missouri hand written above the crossed-out “Arkansas.”

**Asplenium ruta-muraria** L. (Aspleniaceae)—Reported by Nuttall (1835) and uncritically re-reported a dozen times from Arkansas for more than 165 years, but a voucher specimen has never been located at BM, K, P, or in any Arkansas herbarium. This species was excluded many times from the flora of Arkansas (Smith 1978, Taylor 1984, Smith 1988, Peck and Taylor 1995). Kartesz and Meacham (1999) erroneously listed the species as present in Arkansas citing Smith (1988).

**Burmannia biflora** L. (Burmanniaceae)—Reported by Demaree (1943, p. 21) as his record, but without any comment. The species was not listed nor excluded by Smith (1978, 1988). A specimen from Cass Co., Texas, adjacent to Texarkana, Miller Co., Arkansas, exists at BRIT (per. comm., G. Diggs). The species occurs nearby in Louisiana as well.

**Dryopteris ×neowherryi** W.H. Wagner [*D. goldiana* × *marginalis*] (Dryopterida-



ceae)—Montgomery (1981) erroneously reported this hybrid from Arkansas in a summary of *Dryopteris* hybrid morphology, systematics, and phytogeography. Montgomery confused this hybrid with *D. ×leedsii* which does occur in Arkansas. Peck and Taylor (1995) and Peck (2000) specifically excluded this hybrid from Arkansas. Kartesz and Meacham (1999) erroneously listed this species as present in Arkansas citing Montgomery (1981).

**Escobaria missouriense** (Sweet) D.R. Hunt var. **similis** (Englem.) N.P. Taylor (Cactaceae)—Benson (1982) reported *Coryphantha missouriense* (Sweet) Britton and Rose var. *caespitosa* (Engelmann) Benson from Miller Co., AR, based on a specimen with only an indeterminate location of “Arkansas” [Dyck s.n., 1857 (MO)]. Zimmerman (1985) referred to this taxa as *C. missouriensis* (Sweet) Britton and Rose var. *similis* (Engelmann) A. Zimmerman and mapped it in Texas and Oklahoma, but not in Arkansas. Orzell and Bridges (1987) excluded this find by Benson (1982), considering it to be a Oklahoma record based on confusion over the concept of Arkansas Territory. The “Arkansas Territory” (1819 - 1836) also included what is modern Oklahoma. Smith (1988) agreed and cited Orzell and Bridges (1987). However, to accept this interpretation, one must assume that Arkansas had been a state for 21 years at the time the specimen was collected and that the collector did not know this. Kartesz and Meacham (1999) erroneously listed the species as present in Arkansas, but cited Smith (1988) who excluded it.

**Huperzia ×bartleyi** (Cusick) Kartesz & Gandhi [*H. lucidula* × *porophila*] (Lycopodiaceae)—Smith (1988) reported this as a “possible addition” to the flora of Arkansas, meaning that it might be found in the state in the indefinite future, but that it had not as of yet been so documented. Peck and Taylor (1995) specifically excluded this hybrid from the flora of Arkansas, noting that only *H. lucida* Michx. was known in Arkansas. Kartesz and Meacham (1999) erroneously listed this hybrid for Arkansas citing Smith (1988).

**Krameria lanceolata** Torr. (Krameriaceae)—This species was reported from Arkansas by Nuttall (1835), listed by Lesquereux (1860), and again by Branner and Coville (1891). Demaree (1943) compiled the name into his list, but a voucher has not been located. Smith (1978, 1988) excluded this species. Kartesz and Meacham (1999) erroneously listed the species as present in Arkansas, citing Demaree (1943). The origin of this record may be a Nuttall specimen from Oklahoma. Alternatively, there is a specimen collected in 1836 [C.W. Short s.n. MO] at the “Arkansas [River] at Leavenworth,” a location within the Arkansas Territory, but now in present-day Oklahoma.

**Lesquerella angustifolia** (Torr. & A. Gray) Wats. (Brassicaceae)—This species was collected by Nuttall (1835) from “prairies near the Red River, Arkansas.” Re-reported by Branner and Coville (1891), Small (1913), and listed by Demaree (1943). The collection location was actually in McCurtain Co., Oklahoma, then part of Arkansas Territory (Goodman, 1966). Rollins and Shaw (1973) excluded it. Smith



(1978) listed this species as a “possible addition” to the state flora. Smith (1988) excluded this species as it was never documented from present day Arkansas. The species was erroneously re-listed for Arkansas on some national e-lists.

**Lesquerella gracilis** (Hook.) Wats. var. **repanda** (Nutt.) Pays. (Brassicaceae)—This species was collected by Nuttall (1835) from “prairies near the Red River, Arkansas.” Re-reported by Branner and Coville (1891), Small (1913), and listed by Demaree (1943). The location was actually in McCurtain Co., Oklahoma, then part of Arkansas Territory (Goodman, 1966). Rollins and Shaw (1973) and Smith (1978, 1988) excluded this species from the flora of Arkansas. This species was erroneously re-listed for Arkansas on some national e-lists.

**Lonicera albiflora** Torr. & A. Gray (Caprifoliaceae)—This species was reported from Arkansas by Small (1913). Ferguson (1966a) noted that the type locality was “Fort Towson, Arkansas.” Fort Towson is in SE Oklahoma, another confusion regarding Arkansas Territory which included present day Oklahoma. This species was excluded by Smith (1978, 1988). Kartesz and Meacham (1999) erroneously re-listed the species as present in Arkansas, citing Smith (1988).

**Rhynchosia minima** (L.) DC. (Fabaceae)—This species was reported for Arkansas by Greer (1978) based on a specimen collected in the “Arkansas Refuge [White River?],” ostensibly in Phillips or Arkansas counties, but with a dot that was placed in Desha Co. The specimen (*Cory* 45847 FSU) was actually from Aransas Co., Texas, Aransas National Wildlife Refuge. Smith (1988) excluded this species from Arkansas. Kartesz and Meacham (1999) erroneously re-listed this species as present in Arkansas, citing Smith (1988).

**Rivina humilus** L. (Phytolaccaceae)—This species was collected by Nuttall at “Red River, Arkansas” (voucher at NY), in present day Oklahoma, then Arkansas Territory. The species was reported by Branner and Coville (1891). Demaree (1943), who had never seen it in Arkansas, commented that this species must be “probably rare in the state.” Smith (1978, 1988) did not list this species, and he only considered it as a “possible addition.” Kartesz and Meacham (1999) erroneously re-listed the species as present in Arkansas, citing Smith (1988). Some confusion may have resulted from uncorrected specimen labels on duplicates, such as an E.J. Palmer specimen at MO (*E.J. Palmer* #30521), collected on 7 June 1926 from Brewster Co., Texas, typed on a “Flora of Arkansas” label blank with the correct state typed above the strike-over of “Arkansas.”

**Smilax auriculata** Walt. (Smilacaceae)—This species was reported for Arkansas by Duncan (1967). Tucker (1976) noted it was an enigmatic, 500 mi range extension reported by Duncan (1967), but a voucher was not located. Smith (1978, 1988) mapped it in his Arkansas atlas without seeing a voucher, referring to Duncan (1967). Smith (1994) listed the species as a “possible addition” denoted by an asterisk. Kartesz and Meacham (1999) erroneously listed the species as present in Arkansas, citing Smith (1988). No Arkansas specimen vouchered this record; it was mismapped by Duncan (1967). Moore (1941) reported that *S.*



*walteri* was present in Arkansas near Hot Springs, Garland Co. It was also known from Hempstead Co. at this time (Buchholz 395 UARK). Coker (1944) re-reported the presence of *S. walteri* in "swamps," in Garland Co., Arkansas. The dot for Garland Co. that belonged on the *S. walteri* map, was absent in Duncan (1967). A clerical error was made: the dot for *S. walteri* was incorrectly mapped onto the *S. auriculata* map and placed incorrectly in the adjacent Montgomery Co.

#### EXCLUSIONS FROM ARKANSAS FLORA

- Agrostis capillaris** L. (Poaceae)—The species was listed by Moore (1961); Smith (1988) noted the species as a "possible addition," citing that all earlier records were based on cultivated material (turf), not on escaped or established plants beyond cultivation; Kartesz and Meacham (1999) erroneously listed the species as "present," citing Smith (1988).
- Arundinaria gigantea** (Walt.) Muhl. subsp. **tecta** (Walt.) McClure (Poaceae)—Branner and Coville (1891) listed this variety for Arkansas without citing a voucher. Efforts since Buchholz and Palmer (1926) have failed to locate a known and valid voucher. Kartesz and Meacham (1999) listed this variety for Arkansas, citing the compiled list of Demaree (1943).
- Asclepias rubra** L. (Asclepidaceae)—This species was listed by Kartesz and Meacham (1999) for Arkansas, based on one of a series of unpublished manuscripts (A. Radford et al., eds. Vascular Flora of Southeastern United States). The species occurs to the south in Louisiana and eastward along the Gulf Coastal Plain (Woodson 1954), but a voucher from Arkansas has not been located.
- Boltonia diffusa** Ell. var. **diffusa** (Asteraceae)—Branner and Coville (1891) listed this variety for Arkansas without citing a voucher. Efforts since Buchholz and Palmer (1926) have failed to locate a known and valid voucher. Kartesz and Meacham (1999) listed this variety for Arkansas, citing the compiled list of Demaree (1943).
- Buddleja lindleyana** Fortune ex Lindl. (Buddlejaceae)—Kartesz and Meacham (1999) listed this species as present in Arkansas and cited a reference to one of a series of unpublished manuscripts (A. Radford et al., eds. Vascular Flora of the Southeastern United States). Although known as a horticultural shrub planted across the state, it has not been reported to escape in Arkansas.
- Carex debilis** Michx. var. **rudgei** Bailey (Cyperaceae)—This variety was listed for Arkansas by Buchholz and Palmer (1926), compiled by Demaree (1943), tracked as *C. debilis* Michx. var. *pubens* Gray by Arkansas Natural Heritage Commission, reduced to synonymy by Smith (1988), and reinstated as present by Kartesz and Meacham (1999) citing ANHC. In Vol. 23 of Flora North America, the two varieties are considered to be a synonym of var. *pubens*, already known from Arkansas.
- Carex microrhyncha** Mack. (Cyperaceae)—Kartesz and Meacham (1999) listed this species for Arkansas based on a personal communication with S. D. Jones; Vol. 23 of Flora North America reduced it to a synonym of *C. umbellata* Schkuhr ex Willd., already known from Arkansas.
- Carex tenera** Dewey (Cyperaceae)—The species was listed by Smith (1968) as not present in Arkansas, but he considered it to be a "possible addition"; listed erroneously as "rare" for Arkansas by Kartesz and Meacham (1999) citing Smith (1988).
- Carex verrucosa** Muhl. (Cyperaceae)—This species was listed by Demaree (1943). It was reported by Smith (1968) as a "possible addition," as it lacked a known voucher. It was reinstated erroneously by Kartesz and Meacham (1999) as "present, but now extinct."
- Chenopodium berlandieri** Moq. var. **boscianum** (Moq.) H. Å. Wahl (Chenopodiaceae)—Branner and Coville (1891) listed this variety for Arkansas without citing a voucher. Efforts since Buchholz and Palmer (1926) have failed to locate a known and



valid voucher. Kartesz and Meacham (1999) listed this variety for Arkansas, citing the compiled list of Demaree (1943).

**Chloris cucullata** Bisch. (Poaceae)—This species was listed by Branner and Coville (1891), compiled by Demaree (1943), excluded by Smith (1988), and erroneously re-listed as “?present” in Arkansas by Kartesz and Meacham (1999) citing Smith (1988).

**Clinopodium vulgare** L. (Lamiaceae)—This species was listed for Arkansas as *Satureja vulgaris* (L.) Fritsch. by Branner and Coville (1891), compiled by Demaree (1943), and erroneously re-listed by Kartesz and Meacham (1999). It is likely that this record was based upon mis-identified *Satureja arkansanum* (Nutt.) House. rather than upon a garden escape, but a voucher is lacking to confirm this.

**Collinsonia canadensis** L. (Lamiaceae)—This species was reported by Demaree (1943) and excluded by Smith (1968) as the record lacked known voucher. The species was erroneously re-instated by Kartesz and Meacham (1999), but they cited Smith (1988).

**Corispermum americanum** (Nutt.) Nutt. var. **americanum** (Chenopodiaceae)—This variety was not listed by Smith (1988). Kartesz and Meacham (1999) listed this variety for Arkansas and cited Smith (1988). Kartesz and Meacham (1999) did not list as present in Arkansas the related *C. americanum* (Nutt.) Nutt. var. *rydbergii* Mosyakin, which Smith (1988) documented in Arkansas under *C. hyssopifolium* L. Perhaps the compiler added the wrong variety and deleted the correct variety of this species for Arkansas.

**Crataegus monogyna** Jacq. (Rosaceae)—This exotic and horticultural species was listed without a voucher by Tucker (1976), based on the expert authority and memory of E.J. Palmer. Palmer visited UARK in 1955 to annotate specimens and left a hand-written list of *Crataegus* from Arkansas based in part on his memory. Smith (1978, 1988) listed it only as “possible” for Arkansas, citing Tucker (1976). Kartesz and Meacham (1999) erroneously re-listed it for Arkansas and cited Smith (1988). The list was not extant at UARK.

**Crataegus succulenta** Schrad. ex Link (Rosaceae)—This exotic and horticultural species was listed by Tucker (1976), based on the expert authority and memory of E.J. Palmer. Palmer visited UARK in 1955 to annotate specimens and left a hand-written list of *Crataegus* from Arkansas based in part on his memory. Smith (1978, 1988) listed it only as “possible” for Arkansas, citing Tucker (1976). Kartesz and Meacham (1999) erroneously listed it for Arkansas and cited Smith (1988). The list was not extant at UARK.

**Crinum americanum** L. (Liliaceae)—This species was listed by Branner and Coville (1891), compiled by Demaree (1943), excluded by Smith (1988), and reinstated as “present” by Kartesz and Meacham (1999) by citing Smith (1988). [The species was now excluded, as the record was not backed with a known voucher.]

**Cucurbita maxima** Duchesne (Cucurbitaceae)—This species was excluded by Smith (1988) referring to cultivated material from Newton Co. collected by Ralph Thompson in 1977; reinstated erroneously by Kartesz and Meacham (1999) based on Smith (1988). The species is not known in Arkansas beyond cultivation.

**Cyperus thyrsoflorus** Junghahn (Cyperaceae)—Kartesz and Meacham (1999) listed this species for Arkansas, based on a text passage in a monograph on Central and South American species (Tucker 1994). There are neither dots, maps, nor vouchers supporting this record. In Vol. 23 of *Flora North America*, on p. 185, the species was not mapped for Arkansas but occurs in the Gulf states to the south.

**Desmodium canadense** (L.) DC. (Fabaceae)—This species was reported by Demaree (1943), listed as not yet known from the state but “possible” by Smith (1978, 1988). The species does not in Arkansas according to Isely (1998), but is found to the north in Missouri and northeastern North America. Kartesz and Meacham (1999) considered it “?present” in Arkansas, citing “Gleason (1963)” [1952? or Gleason and Cronquist, 1963?] Without a known and valid voucher, the species remains excluded from the flora.



**Drosera intermedia** Hayne (Droseraceae)—

This species was reported from Conway Co. by Moore (1951); Smith (1968) excluded this species as it was based on misidentification of *D. brevifolia* Pursh. The species was reinstated erroneously by Kartesz and Meacham (1999) by citing Smith (1968).

**Eragrostis elliottii** S. Wat. (Poaceae)—Kartesz and Meacham (1999) listed this species for Arkansas, citing the revised Flora of Missouri by Yatskievych (1999), who cited Texas manuals by Gould (1975) and Correll and Johnson (1970). A known voucher is lacking.**Erigeron philadelphicus** L. var. **philadelphicus** (Asteraceae)—Branner and Coville (1891) listed this variety for Arkansas without citing a voucher. Efforts since Buchholz and Palmer (1926) have failed to locate a known and valid voucher. Kartesz and Meacham (1999) listed this variety for Arkansas, citing only the compiled list of Demaree (1943).**Erigeron pulchellus** Michx. var. **pulchellus** (Asteraceae)—Branner and Coville (1891) listed this variety for Arkansas without citing a voucher. Efforts since Buchholz and Palmer (1926) have failed to locate a known and valid voucher. Kartesz and Meacham (1999) listed this variety for Arkansas, citing only the compiled list by Demaree (1943).**Eupatorium album** L. var. **album** (Asteraceae)—Branner and Coville (1891) listed this variety for Arkansas without citing a voucher. Efforts since Buchholz and Palmer (1926) have failed to locate a known and valid voucher. Kartesz and Meacham (1999) listed this variety for Arkansas, citing only the compiled list by Demaree (1943).**Eustoma exaltatum** (L.) Salib. ex G. Don subsp. **russellianum** (Hook.) Kartesz (Gentianaceae)—This variety was reported for Arkansas by Moore (1951). Shinnars (1957) corrected the varietal name to *E. exaltatum* (L.) Salib. subsp. *exaltatum*. The change was noted by Smith (1988) and the Arkansas Natural Heritage Commission. The incorrect variety was re-instated by Kartesz and Meacham (1999) as "present" and by citing the ANHC. Kartesz and Meacham (1999) also listed the correct varietal name for the species in Arkansas.**Glycyrrhiza lepidota** Pursh (Fabaceae)—This

species was reported by Branner and Coville (1891), compiled by Demaree (1943), and noted by Steyermark (1963). It was only listed as "possible" in Arkansas by Smith (1978, 1988) as a voucher was not found. It was not mapped in Arkansas by Isely (1998). The species was erroneously listed by Kartesz and Meacham (1999) by citing only the compiled list by Demaree (1943).

**Hieracium marianum** Willd. (Asteraceae)—Kartesz and Meacham (1999) listed this species for Arkansas based on personal communication with Guy Nesom. Nesom does not recollect this communication, but thinks that this record is unlikely (pers. comm. Guy Nesom). Lacking a known voucher, the species was excluded.**Humulus japonicus** Sieb. & Zucc. (Cannabaceae)—This exotic and weedy species was listed as "present but extinct" in Arkansas by Kartesz and Meacham (1999), who cited Flora of North America (Vol. 3). Lacking a known voucher, the species was excluded.**Hydrophyllum macrophyllum** Nutt. (Hydrophyllaceae)—All prior reports, such as in Smith (1988) are misidentified material of recently named *Hydrophyllum brownei* Kral & Bates. The species was erroneously re-instated for Arkansas by Kartesz and Meacham (1999) along with the correct species, *H. brownei*.**Lindera benzoin** (L.) Blume var. **benzoin** (Lauraceae)—This variety was first reported by Branner and Coville (1891), compiled by Demaree (1943), but not mapped by Tucker (1976). Smith (1978, 1988) who assigned all Arkansas material to *L. benzoin* var. *pubescens* Willd., but the incorrect variety was reinstated by Kartesz and Meacham (1999) who cited Demaree (1943).**Linum lewisii** Pursh var. **lewisii** (Linaceae)—The variety was listed by Branner and Coville (1891), compiled by Demaree (1943), excluded by Smith (1988) noting that Rogers (1963) mapped the species no closer than north-central Mississippi. Kartesz and Meacham (1999) reinstated this species as "?present" based on an "unattributed personal communication."**Lobelia puberula** Michx. var. **puberula**



(Campanulaceae)—Branner and Coville (1891) listed this variety for Arkansas without citing a voucher. Efforts since Buchholz and Palmer (1926) have failed to locate a known and valid voucher. Kartesz and Meacham (1999) listed this variety for Arkansas, citing only the compiled list by Demaree (1943).

**Lobelia siphilitica** L. var. **ludoviciana** A. DC. (Campanulaceae)—This variety was reported by Demaree (1943) based on his own collections; listed for the state by Kartesz and Meacham (1999) citing Demaree (1943). All herbarium material in Arkansas and at BRIT with this name on Demaree collections was annotated as var. *siphilitica* by R. L. Wilbur, Duke University, in 1969.

**Lonicera reticulata** Raf. (Caprifoliaceae)—This species was reported by Demaree (1943) as *L. prolifera* (Kirchn.) Booth ex Rehd., but a voucher has not been located.; Kartesz and Meacham (1999) listed it as present in Arkansas citing Demaree (1943).

**Lycopus** × **sherardii** Steele [*L. uniflorus* × *virginicus*] (Lamiaceae)—Henderson (1962) mapped this hybrid for Arkansas in the form of a shaded overlap of both parent species, but without dots evident or vouchers cited. Listed for Arkansas by Kartesz and Meacham (1999), based on Henderson (1962).

**Lysimachia tonsa** (Wood) Wood ex Pax & R. Kunth (Primulaceae)—This species was listed by Demaree (1943) as *Steironema tonsum* (Wood.) Bicknell, but was excluded by Smith (1988) as a voucher was lacking. The species was erroneously reinstated as present by Kartesz and Meacham (1999).

**Magnolia pyramidata** Bartr. ex Pursh (Magnoliaceae)—This species was reported for Arkansas by Hardin (1972), without voucher citations. Tucker (1976) and Smith (1977, 1988) excluded this species. Kartesz and Meacham (1999) erroneously re-listed this species for Arkansas based on Hardin (1972). No Arkansas vouchers are known. Specimens elsewhere may have small leaves that fit herbarium sheets rather than normal sized leaves of *M. tripetala* (L.) L., leading to misidentifications. Any plant from Arkansas

would seem to be extralimital, based on the maps of both species in Little (1976).

**Matelea carolinensis** (Jacq.) Woods. (Asclepidaceae)—This species was listed by Branner and Coville (1891), compiled by Demaree (1943), and treated as an additional representative of *M. decipiens* (Alexander) Woods. by Smith (1988). The species was reinstated by Kartesz and Meacham (1999) citing only the compiled list by Demaree (1943).

**Medeola virginiana** L. (Liliaceae)—This species was listed by Branner and Coville (1891), compiled by Demaree (1943), and listed as a “possible addition” but not present by Smith (1988) as vouchers were not found. The species was erroneously reinstated as “present” by Kartesz and Meacham (1999) by citing Smith (1988).

**Mirabilis linearis** (Pursh) Heimerl (Nyctaginaceae)—This species was listed as *Oxybaphus angustifolia* (Pursh) B.L. Robbins by Branner and Coville (1891), compiled by Demaree (1943), and excluded by Smith (1988) as a voucher was lacking. The species was erroneously re-listed as “?present” by Kartesz and Meacham (1999) citing Smith (1988).

**Nymphaea odorata** Ait. subsp. **tuberosa** (Paine) Wiersma & Hellquist (Nymphaeaceae)—Kartesz and Meacham (1999) listed this variety for Arkansas, citing a text passage in the Muenscher (1944). Later treatments by Fassett (1957) and Crow and Hellquist (2000) place this variety to the north of Arkansas.

**Oenothera nutans** Atkinson & Bartlett (Onagraceae)—Kartesz and Meacham (1999) listed this species for Arkansas, citing Dietrich et al. (1997). The species was not mapped in Arkansas, nor do voucher citations list any Arkansas specimens in that reference.

**Opuntia humifusa** (Raf.) Raf. var. **austrina** (Small) Dress (Cactaceae)—Kartesz and Meacham (1999) listed this variety for Arkansas, citing only the compiled list by Demaree (1943). Great Plains Flora Association (1977) mapped this variety west of Arkansas, again a possible confusion based on Arkansas Territory that included Oklahoma.



**Oxydendrum arboreum** (L.) DC. (Ericaceae)—

This species was first listed by Lesquereux (1860), re-listed by Branner and Coville (1891), listed again by Moore (1941), and compiled by Demaree (1943). It was excluded by Tucker (1976) as a voucher was lacking. It was re-excluded by Smith (1978, 1988). It was erroneously reinstated as “?present” by Kartesz and Meacham (1999). The species is known as a street tree in Arkansas, but it has not escaped.

**Paronychia fastigiata** (Raf.) Fern. var. **paleacea**

**Fern.** (Caryophyllaceae)—Demaree (1943) reported this variety for Arkansas based on his own collections; Kartesz and Meacham (1999) listed this variety for Arkansas. All Demaree specimens with this name in Arkansas and at BRIT were annotated in 1985 by J. W. Thieret to be var. *fastigiata*, already known from Arkansas.

**Pentodon pentandrus** (K. Schum.) Vatke

(Rubiaceae)—Smith (1988) noted its presence in adjacent counties in Louisiana based on MacRoberts (1988) and suggested that it might be searched for in Arkansas; Kartesz and Meacham (1999) erroneously listed it as “present” in Arkansas, citing Smith (1988).

**Physocarpus opulifolius** (L.) Maxim. var.

**opulifolius** (Rosaceae)—First reported by Buchholz and Palmer (1926) and compiled by Demaree (1943). All Arkansas material was assigned to *P. opulifolius* (L.) Maxim. var. *intermedius* (Rydb.) Robinson by Tucker (1976). Smith (1978, 1988) agreed. Kartesz and Meacham (1999) erroneously reinstated the incorrect variety by citing Demaree (1943).

**Physostegia digitalis** Small (Lamiaceae)—

Kartesz and Meacham (1999) listed this species as “?present” in Arkansas, referring to Cantino (1982). A review of this source shows no text passage mentioning this species in Arkansas, nor map dots in Arkansas, or vouchers.

**Plantago major** L. (Plantaginaceae)—

This species was listed by Branner and Coville (1891), and compiled by Demaree (1943). It was listed as a “possible addition” but not present by Smith (1988) who noted the absence of

a voucher. It was erroneously reinstated by Kartesz and Meacham (1999) citing only the compiled list by Demaree (1943).

**Polygala verticillata** L. var. **verticillata**

(Polygalaceae)—Branner and Coville (1891) listed this variety for Arkansas without citing a voucher. Efforts since Buchholz and Palmer (1926) have failed to locate a known and valid voucher. Kartesz and Meacham (1999) listed this variety for Arkansas, citing only the compiled list by Demaree (1943).

**Populus × canadensis** Moench. [*P. deltoides* ×

*nigra*] (Salicaceae)—This cultivated hybrid was listed for Arkansas by Kartesz and Meacham (1999). All specimens of this hybrid in Arkansas are cultivated materials from Washington Co. at UARK.

**Populus × canescens** Small [*P. alba* × *tremula*]

(Salicaceae)—This cultivated hybrid was listed for Arkansas by Kartesz and Meacham (1999). All specimens of this hybrid in Arkansas are cultivated materials from Newton Co. and Washington Co. at UARK.

**Populus × jackii** Sarg. [*P. balsamifera* × *deltoides*]

(Salicaceae)—This cultivated hybrid is planted in southern Arkansas, but although persisting and expanding as clones, it is not known from any wild population nor is it escaping from tree farms. The hybrid was listed by Tucker (1976) as present in persistent plantings. Smith (1978, 1988) excluded it from the flora as it had not spread or naturalized. Kartesz and Meacham (1999) erroneously listed it for Arkansas by citing Smith (1988).

**Potamogeton epihydrus** Raf. (Potamogeton-

aceae)—Kartesz and Meacham (1999) list this for Arkansas, citing a pers. communication with Robert Haynes. Haynes has no such recollection nor any records documenting a voucher for this record.

**Potentilla millegrana** Engelm. (Rosaceae)—

Robertson (1974) remarked that this species “could” be in Arkansas; based on this passage, Kartesz and Meacham (1999) erroneously listed this species for Arkansas.

**Pyracantha coccinea** M. Roemer (Rosaceae)—

Smith (1988) excluded this species as all known vouchers were based on cultivated



material, such as that at UARK collected by Ralph Thompson from Newton Co. The species was listed erroneously as "present" by Kartesz and Meacham (1999) by citing Smith (1988).

**Quercus rubra** L. var. **ambigua** (A. Gray) Fern. (Fagaceae)—The variety was listed by Kartesz and Meacham (1999) for Arkansas, based only on the compiled list by Demaree (1943). Tucker (1976) and Smith (1978, 1988) excluded this variety as they considered it to be a trivial name not reflective of geographic variation. Vol. 3 of *Flora North America* does not use this varietal name.

**Quercus** × **humidicola** Palmer [*Q. bicolor* × *lyrata*] (Fagaceae)—This hybrid was listed by Demaree (1943). It was excluded by Tucker (1976) as one of the parents (*Q. bicolor*) is not known from Arkansas; Smith (1978, 1988) concurred. The hybrid was re-listed by Kartesz and Meacham (1999) by citing Demaree (1943). Perhaps some of the confusion can be traced to a specimen cited by Palmer (1948) from Pulaski Co., Illinois, [not Arkansas.]

**Quercus** × **incomita** Palmer [*Q. falcata* × *marilandica*] (Fagaceae)—This hybrid was listed as present by Demaree (1943). Materials assignable to this hybrid for Arkansas were misidentified specimens of *Q. × bushii* Sarg. [*Q. marilandica* × *velutina*], according to Palmer (1948, p. 19) and with his annotations made in 1955 at UARK. The hybrid was erroneously re-listed for Arkansas by Kartesz and Meacham (1999).

**Ranunculus cymbalaria** Pursh (Ranunculaceae)—Kartesz and Meacham (1999) listed this species for Arkansas, citing "Sida 1976." In that source, the species' distribution was summarized in a text passage (Keener, 1976) as including Texas, Oklahoma, Missouri, Illinois, and New Jersey, but not Arkansas; there are no dots or vouchers suggestive of an Arkansas occurrence.

**Ranunculus pusillus** Poir. var. **pusillus** (Ranunculaceae)—Branner and Coville (1891) listed this variety for Arkansas without citing a voucher. Efforts since Buchholz and Palmer (1926) have failed to locate a known and valid voucher. Kartesz and

Meacham (1999) listed this variety for Arkansas, citing only the compiled list by Demaree (1943).

**Rhynchospora nivea** Boeckl. (Cyperaceae)—This species was first reported for Arkansas in Correll and Johnson (1970). It was probably based on misidentified Arkansas material of *R. colorata* (L.) Pfeiffer. All white-bracted *Rhynchospora* in Arkansas are specimens of *R. colorata*, a larger and coarser species typical of southeastern United States, rather than the Oklahoma - Texas species that is smaller and finer in form.

**Rudbeckia bicolor** Nutt. (Asteraceae)—Branner and Coville (1891) listed this species for Arkansas without citing a voucher. Efforts since Buchholz and Palmer (1926) have failed to locate a known and valid voucher. Kartesz and Meacham (1999) listed this variety for Arkansas, citing only the compiled list by Demaree (1943).

**Salix amygdaloides** Anderss. (Salicaceae)—This species was reported by Smith (1978, 1988) for Crittenden Co., Arkansas, but it was excluded by Argus (1986) as it was based on a mis-identified specimen of *S. eriocephala*. Great Plains Flora Association (1977) mapped it in Franklin Co., Arkansas, but it was excluded by Argus (1986) as the specimen was collected in Franklin Co., Kansas.

**Scutellaria incana** Biehler var. **punctata** (Chapman) C. Mohr (Lamiaceae)—Kartesz and Meacham (1999) listed this variety for Arkansas, citing Fernald (1950). Epling (1942) does not map this variety in Arkansas, but does map *S. incana* Biehler var. *incana*. Lacking a known and valid voucher, this variety was excluded from the state flora.

**Scutellaria nervosa** Pursh (Lamiaceae)—Kartesz and Meacham (1999) listed this species for Arkansas, citing only the compiled list by Demaree (1943). Epling (1942) does not map this species in Arkansas. Lacking a known and valid voucher, this species was excluded from the state flora.

**Sesuvium verrucosum** Raf. (Aizoaceae)—This species was reported for Arkansas by Smith (1978, 1988), but without a voucher, referring to text passages in Correll and Johnson (1970). As a known and valid voucher has



not been found in the last 30 years, this species was excluded from the flora of Arkansas.

**Smilax illinoensis** Mangaly (Smilacaceae)—Kartesz and Meacham (1999) reported this species for Arkansas based on Mangaly (1968). Mangaly (1968) did not report *S. illinoensis* in Arkansas. A clerical error was made in reading Map 22 on p. 75, wherein a dot for *S. pulverulenta* was incorrectly assigned to *S. illinoensis*.

**Sporobolus airoides** (Torr.) Torr. (Poaceae)—This species was reported by Buchholz and Palmer (1926), compiled by Demaree (1943), reported with a voucher by Smith (1977). It was then reported as misidentified material of *Sporobolus cryptandrus* (Torr.) A. Gray by Smith (1988). It was tracked by Arkansas Natural Heritage Commission under the species historic name. It was reinstated erroneously by Kartesz and Meacham (1999) as "present" by citing only the compiled list by Demaree (1943) and ANHC.

**Tridens muticus** (Torr.) Nash var. **muticus** (Poaceae)—This variety was listed by Demaree (1943) as *Triodia mutica* (Torr.) Scribn., and compiled as present by Kartesz and Meacham (1999) citing Demaree (1943). The variety was excluded, as the record lacks a known and valid voucher.

**Utricularia cornuta** Michx. (Lentibulariaceae)—Kartesz and Meacham (1999) listed this species for Arkansas, citing Taylor (1989). Text passages state that this species was in Arkansas, but other passages state that its dis-

tribution is in the southern Gulf Coastal Plain (Florida to Texas), not Arkansas. As a known and valid voucher is lacking, the species was excluded.

**Utricularia striata** LeConte ex Torr. (Lentibulariaceae)—Kartesz and Meacham (1999) listed this species as present for Arkansas, citing text passages in Correll and Johnson (1970). Taylor (1989) did not list it for Arkansas. Lacking a known and valid voucher, the species was excluded.

**Verbena ×deamii** Moldenke (Verbenaceae)—This hybrid was listed by Kartesz and Meacham (1999) for Arkansas based only on the compiled list by Demaree (1943). The hybrid occurs to the north of Arkansas (Moldenke, 1980). A voucher has not been located in Arkansas or at BRIT.

**Viola arvensis** Murr. (Violaceae)—This species was listed for Arkansas by Branner and Coville (1891), compiled by Demaree (1943), but excluded from Arkansas in Russell (1965), and re-excluded in Smith (1978, 1988), who noted the absence of a voucher. It was reinstated erroneously by Kartesz and Meacham (1999) by citing only the compiled list by Demaree (1943).

**Zanthoxylum hirsutum** Buckl. (Rutaceae)—This species was reportedly in Arkansas according to Correll and Johnson (1970). It was relisted by Kartesz and Meacham (1999). All shrubby material in Arkansas is assignable to *Z. americanum* P. Mill.; larger plants are *Z. clava-herculis* L. (Tucker 1976).

#### ACKNOWLEDGMENTS

Thanks are expressed to John Kartesz and Chris Meacham for their efforts and assistance in extracting the Arkansas data from their helpful and powerful national database. Thanks are expressed to BRIT, MO, and UARK herbaria directors and staff for their assistance and dedication to floristic efforts, to the ANHC director and staff for their assistance and excellent record keeping, and to my fellow members and representatives of the Arkansas Vascular Flora Project. The author welcomes being informed of vouchers that would clarify the status of these plants in Arkansas.

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